MARKER BED DESCRIPTION	MARKER BED	OFFSET FROM MARL	BEDDING PLANE	ROCK UNIT DESCRIPTION		
		+80				
				SSH/SH	14	SILTY SHALE/SHALE
		+60				
				SH	13	SHALE Dark grey to black, soft shale with a trace of thin silty laminae.
Pyritic Blue Lamination (PBL): Thin pyritic blue–grey horizon, up to 2–3 mm thick. Contains pyritic crystals or disseminated pyrite.		+40				
Fish Scale Marker: A 1 cm calcareous light grey–brown fossilferous horizon fish scale imprints easily distinguished. Readily identified as a very high gamma reading when geophysically logged.	PBL #2 PBL #1 Fish Scale Marker PBL #3			SSH	12	SILTY SHALE Dark grey to black, soft to medium hard silty shale. Numerous silty/sandy laminae up to 1 mm thick. Fish scales are common.
Siltstone Marker: A 0.8 cm thick siltstone lamimae located immediately below PBL #3. Readily identified by geophysics.	SST Marker					
Centre of Unit 11: Unit 11 is a distinctive 2.0 m thick interbedded grey siltstone–light grey sandstone horizon.	Centre of Unit 11			SST/SS	11	SILTSTONE/SANDSTONE Grey siltstone interbedded with light grey sandstone. Often bioturbated.
		+20		SSH	10	SILTY SHALE Dark grey to black soft to medium hard silty shale with numerous sandy/silty laminae up to 1 mm thick. Local pyrite replacement.
	PBL #4					
				SH	9	SHALE Dark grey to black soft shale. Local trace of silty laminae on the left bank.
Pebble Conglomerate: Marker of rounded–subrounded black chert pebbles, up to 5 mm diameter in a slightly calcareous sandstone matrix. Pebbles usually 1–2 mm diameter, thickness of marker ranges from 5 mm to a horizon with a few pebbles. Usually associated with 2 mm thick white clay seam (BP8). Clay layer usually along pebble layer or occasionally up to 1.0 m above.	Pebble Cong.		BP8	SS/SST (Left Bank)		
Marl: Most distinctive marker on site. Base of marl overlies light coloured clay seam up to 2 mm think (BP12). Above clay is 3 cm cream lamina overlain by dark blue–grey bed up to 5 mm thick. Upper part of marker is a 3.5 cm soft, grey, homogeneous lamina that grades upward into the overlying dark grey shale. Apart from colour variation, marl texture remains constant. A soft granular homogenous material (soft grains also). Permeability greater than surrounding bedrock, band thickness in marl vary as well as its overall thickness. On right bank, marl averages 10 cm thick and on left bank it decreases to 2–5 cm thick. Marl is not present in some areas of reservoir.	Marl DPM No. 1	0	BP12	SSH	8	SILTY SHALE Dark grey to black, soft to medium hard silty shale with common thin silty laminae. Grades to shale in some zones. NOTE: SST/SS band present at top of unit of the left bank only.
Blue Marker: 1 cm thick blue marker, consists of finer grained material than the surrounding rock and weathers slightly more readily on exposure. Possibly associated with disseminated pyrite.	Blue Marker DPM No. 2		BP18			
Discrete Pyrite Marker (DPM): Very thin horizon of either disseminated pyrite or pyrite nodules and stringers. Usually less than 1 cm thick.	DPM No. 3	–20		SST	7	SILTSTONE Grey hard siltstone with numerous sandy laminae to 4 cm in thickness. Common bioturbation. Numerous calcite laminae.
"The Twins" Concretion Layer: Two buff–brown sandy concretion layers up to 7 cm thick spaced 5–10 cm.	"The Twins"		BP25			
Siltstone Concretion Layer: Concretion layer, up to 5 cm thick, buff coloured siltstone, readily identified by geophysics.	SST Conc. Layer			SSH	6	SILTY SHALE Dark grey to black, soft to medium hard silty shale. Numerous silty/sandy laminae.
Sandstone Trace Pebbles: Light grey sandstone bed about 60 cm thick occasionally containing rounded chert pebbles.			BP28			
Pyrite Zone (PZ#2): Pyrite throughout horizon, visibly high concentration of pyrite nodules and stringers, up to 1 cm diameter and 3–4 cm long parallel to bedding.	SS tr. Pebbles	–40		SST/SS	5	SILTSTONE/SANDSTONE Grey hard coarse siltstone. Numerous laminae and lenses of light grey hard bioturbated sandstone. Local calcite laminae and some pyrite replacement.
Lower Pebble Conglomerate: Up to 4 cm thick, usually consists of subangular–rounded pebbles, up to 7 mm diameter. In a light–grey–grey sandy matrix, marker is not continuous and is often not visible in core. Its location is often determined with respect to adjacent markers.	Pyritic Marker (PZ #2)			PBSH	4	POORLY BONDED SHALE Black soft very rilled shale. Common calcite laminae. Core desiccates readily on exposure.
"Twins Too" Two buff–brown sandy concretion layers up to 8 cm thick spaced 5–10 cm.				SSH	3	SILTY SHALE Dark grey to black soft to medium hard with numerous silty laminae. Local bioturbated sandstone lenses.
Sandstone Marker: 1.5 m thick layer consists of siltstone and/or sandstone.	Lower Pebble Cong. "Twins Too" SS Marker		BP31	SH	2	SHALE Dark grey to black, medium soft shale, local trace of silty laminae.
		–60	BP33	SSH	1	SILTY SHALE Dark grey to black, soft to medium hard with local silty to sandy lenses or laminae.
Cap Rock: A distinctive 0.6–1.3 m thick interbedded grey siltstone–light grey sandstone horizon.	Cap Rock					
SSH/SST Marker: A 2.5 mm thick horizon identified as silty shale/siltstone in the silty shale Unit 1.	Silty Shale Siltstone Marker	–80				
		–100				

SITE C CLEAN ENERGY PROJECT

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Figure 11.2.6
General stratigraphic column

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Construction of the Site C Clean Energy Project is subject to required regulatory approvals including environmental certification